UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,426	02/11/2004	Michael L. Purdy	ID-455 (80210)	2896

7590 10/20/2006

CHRISTOPHER F. REGAN, ESQUIRE
ALLEN, DYER, DOPPELT, MILBRATH & GILCHRIST, P.A.
P.O. Box 3791
Orlando, FL 32802-3791

EXAMINER	
MURALIDAR, RICHARD V	
ART UNIT	PAPER NUMBER
2838	

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/776,426	PURDY ET AL.	
	Examiner	Art Unit	
	Richard V. Muralidar	2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 June 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103[a] which forms the basis for all obviousness rejections set forth in this Office action:

> [a] A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-33 are rejected under 35 U.S.C. 103[a] as being unpatentable over Wong et al [US 6614206] in view of Mori et al [2003/0137277].

With respect to Claim 1, Wong teaches a battery charger [Figs. 6-10 recharging apparatus 600] comprising: a charger connector [Fig. 6B female USB connectors 602] to be coupled to a corresponding device connector of a portable device [Fig. 9 portable devices 101, 106, 108, 504] including a rechargeable battery [internal to each of the portable electronic devices listed], the portable device and rechargeable battery each respectfully having a portable device type [Fig. 9 portable device 101 is a laptop computer, 106 is a cell phone, 108 is a printer, 504 is an electric charger] and a rechargeable battery type [each different portable device will have a different type of rechargeable battery according to the needs of that device] associated therewith from among a plurality of different portable device types and different battery types; a charging circuit connected to said charger connector [col. 3 lines 61-67]; and a controller connected to said charger connector [col. 5 lines 10-14; module 702 combines the charging and control circuitry in one aspect, in another aspect the controller is the host PC 101 internal controller in Fig. 8 that supplies and controls

power for the individual devices] and said charging circuit for causing a portable device connected to said charger connector to identify its corresponding portable device type and its corresponding rechargeable battery type, and for causing said charging circuit to charge the rechargeable battery based thereon [Identification at some level is implicitly occurring in Wong's device. Fig. 11 step 1140 states that electrical power is controlled to the device, at the appropriate power level. The charging circuitry/ controller 702 would not be able to do this otherwise, across such vastly differing devices as a cell phone and a printer. Col. 5 lines 10-61: universal recharging of multiple different types of devices, each with their own battery types, is enabled via communications means and the USB hub. Device and battery type identification is implicitly occurring because the recharger 600 is able to communicate with and correctly charge each device according to its own requirements]. Although smart chargers and smart batteries with System Management Bus (SMB) communications are known in the art, Wong does not go into specific detail concerning the battery/device identification process.

Mori teaches a monitoring system that uses SMB communication means and identifies portable devices [par. 0014 laptops, cell phones] and their rechargeable batteries [par. 0016 lines 1-17; par. 0015 lines 24-30 battery information is taken from a database according to the client identification of the device] for the purpose of monitoring the state of the battery and providing information on maintenance. The SMB means also control the charging function of the battery [par. 0002; par. 0016 lines 1-7].

Wong and Mori are analogous devices that identify portable electronic devices and their batteries. At the time of the invention it would have been obvious to one of ordinary skill in the art to add *an expressly stated* means of device/battery identification to Wong's multi-device charger for the benefit of preventing accidental damage due to charging incompatible device/battery types, as well as to warn the user of impending battery failure [U.S. 2003/0137277, par. 0014 lines 18-27].

With respect to Claims 2, 16, and 26, Mori teaches that different portable device types [par. 0075 cell phones; par. 0018 electric vehicles] have at least one different portable device charging parameter; wherein different battery types have at least one different battery charging parameter; and wherein said controller [Fig. 2 collectively the power source monitor 4, the battery management means 7 and the power management controller 12 in communication with service handling server 1] selects at least one actual charging parameter to charge the rechargeable battery based upon a comparison of the at least one different portable device charging parameter and at least one different battery charging parameter [Fig. 2 par. 0060-0061 the portable device laptop 2 charges the battery power source device 3 based on inputs such as voltage, temperature, capacity etc.].

With respect to Claims 3, 17, and 27, Mori teaches the controller selects the at least one actual charging parameter based upon a limiting one of the at least one different portable device charging parameter and the at least one different battery charging parameter [par. 0018 a different portable device can be an electric vehicle, with its associated battery and voltage/temperature/capacity parameters. Par. 0075

also show that cell phones can also be used, in addition to laptops and electric vehicles].

With respect to Claims 4, 18, and 24, Mori teaches the controller further causes the portable device to identify a battery charge level; and wherein said controller further selects the at least one actual charging parameter based upon the battery charge level [par. 0018 parameters can be voltage, temperature, capacity etc.].

With respect to Claims 5 and 19, Mori teaches said controller enters a learning mode for learning the at least one different portable device or battery charging parameter upon receiving a learning mode signal therefrom [par. 0079-0082 the learning mode occurs when the service handling server 1 queries the portable device/laptop on its identity and rechargeable battery status. The server then stores this information].

With respect to Claim 6, Mori teaches at least one memory [Fig. 2 memory 9; par. 0020] connected to said controller for storing the at least one different portable device charging parameter and the at least one different battery charging parameter [par. 0079 lines 14-22].

With respect to Claims 7 and 29, Mori teaches at least one actual charging parameter comprises at least one of a voltage parameter, a current parameter, and a charging time [par. 0079 lines 6-10].

With respect to Claims 8 and 30, Mori teaches the controller further provides an error signal to the portable device based upon an unknown portable device type

or rechargeable battery type [par. 0068 an abnormal notification would be sent to the portable device if the device ID on record does not match the device that is connected, along with its battery ID on record].

With respect to Claims 9, 20, and 31, Mori teaches the controller monitors said charging circuit to detect a charging error during charging of the rechargeable battery [par. 0002; par. 0012, par 0058-0065].

With respect to Claim 10, Mori teaches an indicator [Fig. 10 the screen of PC 2 receives the abnormal message] connected to said controller for providing an error indication upon detecting the at least one charging error.

With respect to Claims 11, 21, and 32, Mori teaches the charger connector also carries communications signals between the portable device and a host device connected thereto [par. 0014, par. 0015].

With respect to Claims 12 and 22, Mori teaches the charger connector also carries communications signals between said controller and a host device connected thereto [par. 0014; par. 0015].

With respect to Claims 13 and 23, Mori teaches the communications signals relate to at least one charging parameter [par. 0061 voltage, temperature, capacity etc. is communicated].

With respect to Claims 14, 24, and 33, Wong teaches the charger connector comprises a universal serial bus (USB) connector [Fig. 6B USB connectors 601, 602].

With respect to Claim 15, Wong teaches a battery charging system comprising: a portable device [Fig. 8 laptop computer 101] comprising a device connector [the laptop's USB connector] and including a rechargeable battery, the portable device and rechargeable battery each respectfully having a portable device type and a rechargeable battery type associated therewith from among a plurality of different portable device types and different battery types [Fig. 9 portable device 101 is a laptop computer, 106 is a cell phone, 108 is a printer, 504 is an electric charger, and each has its own type of rechargeable battery]; and a battery charger [Figs. 6-10 recharging apparatus 600] comprising a charger connector to be coupled to said device connector [Fig. 6B female USB connectors 602], a charging circuit connected to said charger connector, and a controller connected to said charger connector and said charging circuit [col. 5 lines 10-14; module 702 combines the charging and control circuitry in one aspect, in another aspect the controller is the host PC 101 internal controller in Fig. 8 that supplies and controls power for the individual devices] for causing the portable device to identify its corresponding portable device type and its corresponding rechargeable battery type, and for causing said charging circuit to charge the rechargeable battery based thereon. [Identification at some level is implicitly occurring in Wong's device. Fig. 11 step 1140 states that electrical power is controlled to the device, at the appropriate power level. The charging circuitry/controller 702 would not be able to do this otherwise, across such vastly differing devices as a cell phone and a printer. Col. 5 lines 10-61: universal recharging of multiple different types of devices, each with their own battery types, is enabled via communications means

and the USB hub. Device and battery type identification is implicitly occurring because the recharger 600 is able to communicate with and correctly charge each device according to its own requirements]. Though smart chargers and smart batteries with System Management Bus (SMB) communications are known in the art, Wong does not go into any specific detail about how the identification process occurs.

Mori teaches a monitoring system that uses SMB communication means and identifies portable devices [par. 0014 laptops, cell phones] and their rechargeable batteries [par. 0016 lines 1-17; par. 0015 lines 24-30 battery information is taken from a database according to the client identification of the device] for the purpose of monitoring the state of the battery and providing information on maintenance. The SMB means also control the charging function of the battery [par. 0002; par. 0016 lines 1-7].

Wong and Mori are analogous devices that identify portable electronic devices and their batteries. At the time of the invention it would have been obvious to one of ordinary skill in the art to add *an expressly stated* means of device/battery identification to Wong's multi-device charger for the benefit of preventing accidental damage due to charging incompatible device/battery types, as well as to warn the user of impending battery failure [U.S. 2003/0137277, par. 0014 lines 18-27].

With respect to Claim 25, Mori teaches a battery charging method [encompassed by Figs. 6-10 recharging apparatus 600] for a rechargeable battery carried by a portable device, the portable device and rechargeable battery each respectfully having a portable device type and a rechargeable battery type associated

therewith from among a plurality of different portable device types and different battery types, the method comprising: coupling a device connector of the portable device to a corresponding charger connector; connecting a charging circuit to the charger connector; and causing the portable device to identify its corresponding portable device type and its corresponding rechargeable battery type via the charger connector, and causing the charging circuit to charge the rechargeable battery based thereon [the limitations of this claim have previously been met by the arguments of preceding claims 1 and 15].

Response to Arguments

Applicant's arguments filed 06/09/2006 have been fully considered but they are not persuasive for the following reasons:

Applicant argues on page 13 of REMARKS that the proposed combination of references fails to teach or fairly suggest all of the recitations of the independent claims. Specifically, Wong [U.S. 6614206] does not teach or suggest charging batteries in different devices based upon both the device type and the battery type in use. The examiner submits that the suggestion for this limitation is offered in col. 5 lines 10-60, which states that the recharging apparatus 600 communicates with and charges multiple devices such as PDA's, cell-phones, etc., each according to its own appropriate level. Charger 600 is implicitly charging based on both device type (i.e. PDA, cell-phone etc.) and battery type (appropriate voltage level). This must be the case since the charger is charging across batteries with multiple voltage levels, each powering widely differing device types. The applicant further argues with respect to this issue that "*this likely means that the charging device charges the battery to an expected level based upon what type of battery is supposed to be in the device...*" The examiner points out that identification is implicit in this statement- in order to charge to an expected level based upon what type of battery is supposed to be present, the charger must first know what the type of battery is present (stored memory) or determine it instantaneously upon connection, both of which describe the process of *identification*.

Applicant argues on page 13 that Mori [U.S. 2003/0137277] fails to provide any teaching or suggestion that the way in which the battery is charged could be based on

the information supplied by communication between the device and the server. The examiner submits that Mori is not used to illustrate whether or not the battery could be charged based on identification, but only as an *expressly stated means* showing that battery identification and device identification are known. Wong provides that the charging occurs based on [implied] identification means, since identification must necessarily be occurring in order to charge across multiple device types with multiple battery voltages, as stated above.

Additionally, the examiner notes that the inclination to link the results of the monitoring for abnormal batteries by the server [in Mori] with a charge controller could be easily arrived at by one of ordinary skill in the art, to allow for a long-distance charger controlling means. The suggestion for this is given in par. 0004, which states that *both charging* and *discharging states* are monitored, in an attempt to warn the user of an abnormal battery or a battery nearing the end of its useful life. The motivation for doing this would be to have a centralized remote, and possible redundant/safety feature means of controlling the charging rate of portable devices from a distance in order to optimize the battery lives of a deployed fleet of devices.

Applicant argues on page 14 that hindsight was used as a template or roadmap to piece together the invention from prior art. This is not the case, since universal chargers that identify devices then charge them are known in the art. Wong alone describes most of the claimed invention, with the exception that his means of device and battery identification were not expressly stated, but implicit. Mori was used only to

clarify that an expressly stated means of device and battery identification means is known in the art.

Additionally, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

This action is a **final rejection** and is intended to close the prosecution of this application. Applicant's reply under 37 CFR 1.113 to this action is limited either to an appeal to the Board of Patent Appeals and Interferences or to an amendment complying with the requirements set forth below.

If applicant should desire to appeal any rejection made by the examiner, a Notice of Appeal must be filed within the period for reply identifying the rejected claim or claims appealed. The Notice of Appeal must be accompanied by the required appeal fee.

If applicant should desire to file an amendment, entry of a proposed amendment after final rejection cannot be made as a matter of right unless it merely cancels claims or complies with a formal requirement made earlier. Amendments touching the merits of the application which otherwise might not be proper may be admitted upon a showing a good and sufficient reasons why they are necessary and why they were not presented earlier.

A reply under 37 CFR 1.113 to a final rejection must include the appeal from, or cancellation of, each rejected claim. The filing of an amendment after final rejection, whether or not it is entered, does not stop the running of the statutory period for reply to the final rejection unless the examiner holds the claims to be in condition for allowance. Accordingly, if a Notice of Appeal has not been filed properly within the period for reply, or any extension of this period obtained under either 37 CFR 1.136(a) or (b), the application will become abandoned.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Prior art [US 6809649] by Wendelrup is cited for the disclosure of a method and apparatus for communication between an electronic device and a connected battery, including identification of the battery. Prior art [US 6154006] by Hatanaka is cited for the disclosure of a battery rental system that has a communication and identification system for rechargeable device batteries. Prior art [US 6456037] by Jaki is cited for the disclosure of a battery charger that can quickly identify a connected battery pack for recharging purposes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard V. Muralidar whose telephone number is 571-272-8933. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl D. Easthom can be reached on 571-272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RVM
10/10/2006

KARL EASTHOM
SUPERVISORY PATENT EXAMINER